

**COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN II)**  
**Northern and Central California, Nevada, and Utah**  
**Contract Number N62474-94-D-7609**  
**Contract Task Order No. 029**

**Navy Engineer-In-Charge: Mr. Larry Ramos**  
**BRAC Environmental Coordinator: Mr. Baha Zarah**  
**California Environmental Protection Agency: Ms. Mary Rose Cassa**  
**U.S. Environmental Protection Agency: Mr. Phillip A. Ramsey**  
**California Regional Water Quality Control Board: Mr. Michael Rochette**

**Prepared For**  
**Department of the Navy**  
**Engineering Field Activity West**  
**Naval Facilities Engineering Command**  
**San Bruno, California**

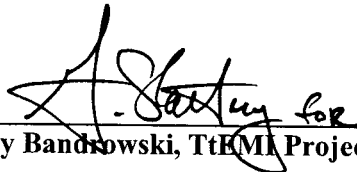
**FINAL**  
**FINDING OF SUITABILITY**  
**TO TRANSFER (FOST) FOR**  
**NAVAL MEDICAL CENTER,**  
**OAKLAND, CALIFORNIA**

**September 1999**

**Prepared By**

**Tetra Tech EM Inc.**  
**135 Main Street, Suite 1800**  
**San Francisco, California 94105**

**URIBE & ASSOCIATES**  
**2930 Lakeshore Avenue, Suite 200**  
**Oakland, California 94610-3614**

  
\_\_\_\_\_  
**Mary Bandrowski, Tetra Tech Project Manager**

  
\_\_\_\_\_  
**Lynne T. Srinivasan, U&A Project Manager**

## CONTENTS

<u>Section</u>	<u>Page</u>
1.0 PURPOSE .....	1
2.0 PROPERTY DESCRIPTION .....	4
3.0 HISTORIC, CURRENT, AND PROPOSED USE .....	5
4.0 REGULATORY AGENCY COORDINATION.....	17
5.0 NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE .....	17
6.0 SUMMARY OF ENVIRONMENTAL FINDINGS.....	17
6.1 UNDERGROUND STORAGE TANKS .....	17
6.2 ABOVEGROUND STORAGE TANKS .....	21
6.3 FORMER HYDRAULIC LIFT AT PARCEL 159.....	21
6.4 ASBESTOS-CONTAINING MATERIALS.....	23
6.5 LEAD-BASED PAINT .....	28
6.5.1 Residential.....	28
6.5.2 Non-Residential.....	30
6.6 POLYCHLORINATED BIPHENYLS .....	36
6.7 RADON.....	36
6.8 PESTICIDES.....	36
6.9 RADIOACTIVE MATERIALS.....	37
6.10 MEDICAL DEBRIS REMOVAL FROM PRIVATE PROPERTY ADJACENT TO NMCO.....	38
6.11 SILVER RECOVERY UNIT.....	38
6.12 GROUNDWATER WELLS .....	38
7.0 ENVIRONMENTAL CONDITION OF PROPERTY.....	39
8.0 NOTICE OF HAZARDOUS SUBSTANCES .....	44
9.0 REQUIRED ENVIRONMENTAL COVENANTS .....	46
10.0 SUMMARY OF NOTIFICATIONS AND RESTRICTIONS .....	47
10.1 NOTIFICATIONS .....	47
10.1.1 Underground Storage Tanks .....	47
10.1.2 Former Hydraulic Lift at Parcel 159 .....	48

## CONTENTS (CONTINUED)

10.1.3	Asbestos .....	48
10.1.4	Lead-Based Paint .....	48
10.1.5	Groundwater Wells .....	50
10.2	RESTRICTIONS.....	50
11.0	UNRESOLVED REGULATORY AGENCY COMMENTS .....	50
12.0	FINDING OF SUITABILITY TO TRANSFER.....	51

## TABLES

<b><u>Table</u></b>		<b><u>Page</u></b>
2-1	PROPERTY DESCRIPTION .....	6
2-2	SUMMARY OF UNDERGROUND UTILITIES .....	12
3-1	SUMMARY OF PARCEL REUSE AND CONVEYANCE .....	15
6-1	UNDERGROUND STORAGE TANK INVENTORY .....	19
6-2	ABOVEGROUND STORAGE TANK INVENTORY .....	21
6-3	ASBESTOS SURVEY SUMMARY OF FINDINGS FOR NON-RESIDENTIAL BUILDINGS .....	24
6-4	ASBESTOS ABATEMENT AT NON-RESIDENTIAL BUILDINGS.....	27
6-5	LEAD-BASED PAINT AT EXISTING HOUSING FACILITIES .....	33
6-6	DTSC SOIL SAMPLE ANALYSIS SUMMARY OF FINDINGS .....	34
6-7	LEAD BASED PAINT AT BUILDING 67, PARCEL 130 .....	35
6-8	LEAD BASED PAINT AT BUILDING 73, PARCEL 134 .....	35
7-1	ENVIRONMENTAL CONDITION OF PROPERTY.....	40
8-1	NOTICE OF PAST PRESENCE OF HAZARDOUS SUBSTANCES STORED, RELEASED, OR DISPOSED .....	45

## CONTENTS (CONTINUED)

### FIGURE

<u>Figure</u>		<u>Page</u>
3-1	REUSE MAP NAVAL MEDICAL CENTER, OAKLAND .....	16

### APPENDIX

A	SAMPLE FORM FOR TRANSFER OF RESIDENTIAL DWELLINGS
---	---

## ABBREVIATIONS AND ACRONYMS

ACM	Asbestos-Containing Material
AST	Aboveground storage tanks
BTEX	Benzene, toluene, ethylbenzene, xylene
CERCLA	Compensation and Liability Act
CFR	Code of Federal Regulations
DFG	Department of Fish and Game
DOD	Department of Defense
DTSC	Department of Toxic Substances Control
EBS	Environmental Baseline Survey
ECP	Environmental Condition of Property
EDC	Economic development conveyance
EFA WEST	Engineering Field Activity West
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FETAX	Frog Embryo Teratogenesis Assay
FOST	Finding of suitability to transfer
HUD	Housing and Urban Development
LBP	Lead-based paint
MG/KG	Milligram per kilogram
MINS	Mare Island Naval Shipyard
NEPA	National Environmental Policy Act
NMCO	Naval Medical Center
NRMP	Navy Radioactive Material Permit
NRSC	Naval Remediation Safety Committee
OBRA	Oakland Base Reuse Authority
OSPR	Office of Spill Prevention and Response
PBC	Public benefit conveyance
PCB	Polychlorinated biphenyl
PPM	Parts per million
PRC	PRC Environmental Management, Inc.
PWC	Public Works Center
RWQCB	Regional Water Quality Control Board
SSPORTS	Supervisor of Shipbuilding Portsmouth Environmental Detachment
TPH	Total petroleum hydrocarbons
TTEMI	Tetra Tech EM Inc.
U&A	Uribe & Associates
UST	Underground storage tank

## 1.0 PURPOSE

The purpose of this finding of suitability to transfer (FOST) is to document the environmentally related findings regarding the proposed property transfer of Naval Medical Center, Oakland (NMCO), Alameda County, California. The subject property described in Section 2.0 will be transferred by various conveyance methods including: economic development conveyance (EDC), public benefit conveyance (PBC), negotiated sale, or public sale. The subject property will be transferred to the City of Oakland, Oakland Museum, United Indian Nation, Seneca Center, Oakland Parks and Recreation, Sea West Federal Credit Union, and possibly to a private party, if a portion of the property is transferred through public sale (see Section 3.0).

This FOST is a result of a thorough analysis of the information contained in the following documents:

- “Final Letter Report on Results of Additional Sampling and Analysis at the Former Hydraulic Lift at Building 111, Naval Medical Center Oakland.” Letter to Mr. Randy Cate, Naval Facilities Engineering Command, Engineering Field Activity West (EFA West) from Lynne T. Srinivasan, Uribe and Associates. April 28, 1999.
- “Results of Additional Sampling and Analysis at the Former Hydraulic Lift at Building 111, Naval Medical Center Oakland (NMCO).” Letter to Mr. Michael Rochette, Regional Water Quality Control Board from Dr. Gerard Chernoff, Office of Spill Prevention and Response (OSPR), California Department of Fish and Game (DFG). April 2, 1999.
- “Removal of Soil Containing Lead-Based Paint, Officer’s Quarters (D & E Williams), Naval Medical Center, Oakland, California.” Prepared by Supervisor of Shipbuilding Portsmouth Environmental Detachment (SSPORTS). February 1999.
- “Naval Medical Center, Oakland, CA, Frog Embryo Teratogenesis Assay - *Xenopus* (FETAX) Characterization, Final Report.” Prepared by The Stover Group, January 1999.
- “Naval Medical Center, Oakland, CA, Frog Embryo Teratogenesis Assay - *Xenopus* (FETAX) Characterization, Final Report.” Prepared by The Stover Group. October 1998.
- “Final Field Report for the Removal and Disposal of Medical Debris from Private Property Adjacent to the Former Naval Medical Center Oakland.” SSPTS. October 21, 1998.

- “Final Sampling and Analysis Work Plan for Additional Investigation, Former Hydraulic Lift at Building 111, Naval Medical Center Oakland.” Prepared by Tetra Tech EM Inc. (TtEMI) and Uribe & Associates (U&A) for EFA West. September 14, 1998.
- “Results of Sampling for Lead in Soil at Parcels 130 and 134, Naval Medical Center Oakland.” Letter from Department of Toxic Substances Control (DTSC). September 25, 1998.
- “Field Report for Removal of Medical Debris from Private Property Located Adjacent to the Former Naval Medical Center in Oakland.” Letter to Mr. Baha Zarah, EFA West from Mr. Jorge Goitia, Alameda County Department of Environmental Health. August 26, 1998.
- “Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR), Disposal and Reuse of Naval Medical Center Oakland, CA.” Prepared by EFA West. , April 1998.
- “Ecological Recommendations for the Hydraulic Hoist Site at the Naval Medical Center Oakland (NMCO); PCA Code: 60130, Project: NTX504.” Letter from Dr. Gerald Chernoff, OSPR, DFG. December 19, 1997.
- “Criteria Analysis for Classification of Hydraulic Lift Site at Building 111 as Low Risk Soil Case, Naval Medical Center Oakland.” Prepared by SSPTS. November 12, 1997.
- “Closure Report, Removal Action for Lead Contamination in Soil, Naval Medical Center Oakland, California.” Prepared by IT Corporation for EFA-West. September 1997.
- “Results of Soil Sampling for Lead from Lead-Based Paint, Naval Medical Center Oakland.” Prepared by DTSC. September 11, 1997.
- “Removal Action Completion Certification for Underground Storage Tank Sites L63D, L63E, 214A, 214B, 214C, 214D, 22-1, and 22-1 at Naval Medical Center, Oakland, California.” Prepared by Regional Water Quality Control Board (RWQCB). August 27, 1997.
- “Removal Action Completion Certification for Underground Storage Tank Sites 141A, 141B, 500, 505, and 512 at Naval Medical Center, Oakland, California.” Prepared by RWQCB. July 10, 1997.
- “Removal Action Completion Certification for Underground Storage Tank Sites 510A, 510B, and 510C at Naval Medical Center, Oakland, California.” Prepared by RWQCB. June 20, 1997.

- “Removal Summary Report for Five Underground Storage Tanks at Naval Medical Center, Oakland, California.” Letter from Mr. Baha Zarah, EFA West to Ms. Mary Rose Cassa. DTSC. April 16, 1997.
- “Asbestos Removal Report for PWC Buildings 11 and 22 at Naval Medical Center, Oakland.” Prepared by Navy Public Works Center (PWC) San Francisco, California. March 25, 1997.
- “Removal Summary Report for Five Underground Storage Tanks at Naval Medical Center, Oakland.” Prepared by PWC San Francisco. March 1997.
- “Environmental Baseline Survey, Sampling and Analysis Summary Report, Naval Medical Center, Oakland, California.” Prepared by PRC Environmental Management, Inc. (PRC) and U&A. December 17, 1996.
- “Environmental Condition of Property Categories, Naval Medical Center, Oakland, California.” Prepared by PRC and U&A. December 17, 1996.
- “Termination of Navy Radioactive Material Permit (NRMP) #04-00619-11NP.” Letter from Naval Radiation Safety Committee (NRSC). October 25, 1996.
- “Final Reuse Plan for Naval Medical Center, Oakland.” Prepared by Oakland Base Reuse Authority (OBRA). August 1996.
- “Technical Memorandum, Former Underground Storage Tank Site 510, Naval Medical Center, Oakland, California, Recommendation for No Action.” Prepared by PRC. July 15, 1996.
- “Underground Storage Tank Closure Report, Commanding Officer’s and Executive Officer’s Residences, Naval Medical Center, Oakland.” Prepared by PWC San Francisco. May 1996.
- “Lead-Based Paint at BRAC Installations.” Prepared by Commander, Naval Facilities Engineering Command, Letter 5090 41CM/960102. April 16, 1996.
- “Lead-Based Paint Inspection of Family Housing Units at Naval Medical Center Oakland.” Prepared by EFA West. April 14, 1996.
- “Asbestos Action Summary for Naval Hospital Oakland, California.” Prepared by Naval PWC, Norfolk, Virginia. March 1996.
- “Final Preliminary Site Assessments at Sites 22 and 214 at Naval Medical Center, Oakland, California.” Prepared by ERM-West, Inc. January 1996.
- “Lead Management Plan, Naval Medical Center, Oakland.” Prepared by PWC, Norfolk Virginia. 1996.

- “Final Basewide Environmental Baseline Survey, Site Assessment and Field Sampling and Analysis Plan, Naval Medical Center, Oakland.” Prepared by ERM-West, Inc. June 9, 1995.
- “Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.” Prepared by U.S. Department of Housing and Urban Development (HUD). June 1995.
- “Oakland Naval Medical Center Asbestos Remediation Report.” Prepared by Mare Island Naval Shipyard (MINS). May 24, 1995.
- “Notice of Stopped Treatment of Photographic Chemicals at Naval Medical Center Oakland.” Letter from Mr. Larry Douchand, NMCO to DTSC. March 31, 1995.
- “Final Environmental Baseline Survey/Community Environmental Response Facilitation Act Report for Naval Medical Center, Oakland.” Prepared by ERM-West, Inc. December 1, 1994.
- “Asbestos Containing Material Survey, Final Report, Naval Medical Center Oakland, California.” Prepared by MINS. December 1994.
- “Site Investigation, Underground Storage Tanks 111A, 510A, 510B, 510C, and 510D, Oakland Naval Hospital, Oakland California, Final Summary Report.” Prepared by PRC. November 16, 1994.
- “Asbestos, Lead Paint and Radon Policies at BRAC Properties.” Memorandum from the Office of the Under Secretary of Defense. October 31, 1994.
- “Non-Housing Building Radon Distribution.” Prepared by Martin Marietta Energy Systems. October 10, 1994.
- “PWC List of Oil Filled Electrical Equipment for Naval Hospital Oakland.” Prepared by PWC. June 5, 1994.

## 2.0 PROPERTY DESCRIPTION

NMCO is located in the east Oakland foothills between San Leandro and central Oakland in California. The site encompasses 183 acres and is bounded by residential areas to the north, a golf course and residential area to the south, Skyline Boulevard to the east, and by Mountain Boulevard and Interstate Route 580 to the west. All 183 acres will be transferred.

NMCO is divided into 63 parcels with approximately 69 structures. The individual parcels, the acres they encompass, a list of buildings currently and historically located on each parcel, and the year each building

was constructed are included on Table 2-1. Utilities on the property include collection and distribution lines/conduits for storm drainage, sanitary sewers, potable water, electrical power, natural gas, and steam. Table 2-2 identifies the utilities on each parcel.

### **3.0 HISTORIC, CURRENT, AND PROPOSED USE**

NMCO was commissioned on July 1, 1942, as a naval hospital to assist in the treatment of wounded service personnel from World War II. The original property consisted of 211 acres, 178 of which were occupied by the Oak Knoll Golf and Country Club. In 1978, 28 of the 211 acres were privately sold. In 1993, the Base Realignment and Closure Commission recommended the closure of NMCO as part of the ongoing nationwide military base closure effort. The facility's Graduate Medical Education program was terminated in July 1995; the hospital ceased medical operations on April 1, 1996, and base closure was completed on September 30, 1996.

Currently, the site includes approximately 135 acres of buildings, roads, parking lots, and recreation facilities, as well 48 acres of undeveloped land. The 183 total acres have been sectioned into 63 parcels to be reused as listed in Table 3-1 and shown on Figure 3-1.

The Oakland Base Reuse Authority approved a reuse plan for the NMCO property in August 1996. The reuse plan specified that the property would be redeveloped to include: residential use, a golf course, mixed use, city and not-for-profit functions, recreation areas, and open space areas. The Navy intends to convey the NMCO property in accordance with the reuse plan. Specific disposal decisions have not yet been made; however, this does not preclude future use from unrestricted reuse of the NMCO property.

TABLE 2-1

**PROPERTY DESCRIPTION  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Acres	Building Number	Year Built	Building Description/Former Use	Demolished
101	7.05	NW Corner of Property	Pre-1949	Pump House Auxiliary	
		NW Corner of Property	Pre-1949	Pump House	
102	7.7	Housing	1969	Base Housing Units	
		68	Pre-1949	Quarters (Sick Officers)	X
		81	Pre-1949	Ward	X
		82	Pre-1949	Ward	X
		83	Pre-1949	Ward	X
		59	Pre-1949	Storehouse	X
103	1.21	64	Pre-1949	Ward	X
104	1.12	63	1942	Facilities Administration, Medical Equipment Repair	
105	0.01	216	1976	Storage (Hazardous Materials)	
106	0.03	215	1976	Storage (Hazardous Materials)	
107	1.64	62	1942	Financial Management	
108	1.05	74	Pre-1949	Ward	X
		510	1982	Former Service Station	
109	6.42	60	Pre-1949	Ward	X
		61	Pre-1949	Ward	X
		109	Pre-1949	PWC Storehouse	X
		139A	Pre-1949	Outdoor Stage, Dressing Rooms	X
		139B	Pre-1949	Projection Booth	X
		508	1975	Gatehouse	
110	2.91	8	1942	Storage (Former Laundry)	
		9	1942	Storage (Former Laundry Maintenance Workshop)	
		10	1942	PWC Offices, Maintenance Shops (Carpenter, Electrician, P.F., Machinist, Sheet Metal)	
		11	1942	Storage (Plumbing and Electrical Materials, Former Sheet Metal and Electrical Shop)	
		12	Pre-1949	Service Station	X
		13	1942	Paint Shop, Air Conditioning Repair	
		51	Pre-1949	Ward	X
		89	1953	Storage (Former Upholstery Shop)	X
		108	1947	Boiler Room for Building 8	

**TABLE 2-1 (CONTINUED)**  
**PROPERTY DESCRIPTION**  
**NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Acres	Building Number	Year Built	Building Description/Former Use	Demolished
111	9.41	Housing	1974	Base Housing Units	
112	0.5	37	1943	Storehouse (Former Stables)	X
		107	1942	Former Radioactive Storage	X
113	0.03	17	1949	Storage (Hazardous Materials [Flammables]; Radioactive Materials)	
114	0.2	14	1942	Operating Room	
		115	1943	Animal Housing, Surgery Teaching, Laboratory Laundry	
115	0.85	Housing	1943-1944	Housing	
116	0.35	36	1943	Firestation	
		85	1943	Office and Storage	X
117	0.14	110	1945	Storage (Dry Goods)	
118	28.7	130	Pre-1949	Water Chlorination Plant	X
		W of CO Residence	Pre-1965	Booster Pumphouse	X
119	0.72	No Building	-- --	No Building	
120	3.24	106	1981	Helipad (Former Subsistence Commissary)	
121	1.12	71	Pre-1949	Ward	X
122	1.59	69	1943	Not in Use, Enlisted Men's Quarters	
123	1.02	65	1942	Drug Screening Laboratory	
124	1.31	66	1942	Quarters, PCO	
125	6.29	1	Pre-1949	Administration Building	X
		4	~ 1949	Laboratories, Central Supply	X
		4 Shed	Unknown	Storage (Adjacent to Building 4)	X
		5	Pre-1949	Cast Room, Blood Bank	X
		6	Unknown	Subsistence Commissary	X
		45	Pre-1949	Ward	X
		50	Pre-1949	Ward	X
126	1.15	80	Pre-1949	Ward	X
		519	1991	Storage (Dry Goods)	
		520	1991	Storage (Dry Goods)	
		521	1992	Storage (Hazardous Waste)	
127	1.9	76	Pre-1949	Ward	X
		77	Pre-1949	Ward	X
128	2.22	72	Pre-1949	Ward	X
		105	Pre-1949	Surgery, Outpatient Clinic	X
		511	1976	Credit Union	
129	4.15	46	Pre-1949	Ward	X

**TABLE 2-1 (CONTINUED)**  
**PROPERTY DESCRIPTION**  
**NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Acres	Building Number	Year Built	Building Description/Former Use	Demolished
		47	Pre-1949	Ward	
		48	Pre-1949	Ward	X
		49	Pre-1949	Ward	X
130	1.1	67	1942	Dental Annex	
131	0.73	101	1943	Naval School of Health Sciences	
132	2.56	78	Pre-1949	Ward	X
		79	Pre-1949	Ward	X
		87	Pre-1965	Storage (Oxygen)	
		505	1975	General Warehouse, Supplies	
133	0.91	75	1943	Education, Training, Radiation Safety	
134	1.42	73	1943	Administration Building	X
135	2.3	No Building	-- --	No Building	
136	3.89	2	Pre-1949	Physical Therapy	X
		3	Pre-1949	X-Ray	X
		34	Pre-1949	Dental Building	X
		40	Pre-1949	Quarters	X
		41	Pre-1949	Ward	X
		91	Pre-1952	Storage (Flammables)	X
137	5.88	7	Pre-1949	Subsistence Commissary	X
		42	Pre-1949	Ward	X
		43	Pre-1949	Ward	X
		44	Pre-1949	Ward	X
		96	Pre-1952	Storage (Flammables)	X
		217	1972	Hospital Plant Auxiliary Utility Building	
		218	1972	Hospital Plant Auxiliary Utility Building	
		223	1968	Storage (Liquid Oxygen)	
		500	1968	Hospital	
		MRI Building	1986	Magnetic Resonance Imaging Building (Trailer))	Removed
		N Corner of Hospital	Pre-1980	Campus Service Center (Trailer)	Removed
138	6.92	52	Pre-1949	Ward (Donated)	X
		53	Pre-1949	Quarters	X
		54	Pre-1949	Quarters	X
		55	Pre-1949	Quarters	X
		56	Pre-1949	Quarters	X
		57	Pre-1949	Steam Regulating Unit	X
		58	Pre-1949	Storehouse	X

**TABLE 2-1 (CONTINUED)**  
**PROPERTY DESCRIPTION**  
**NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Acres	Building Number	Year Built	Building Description/Former Use	Demolished
139	0.2	512	1990	Hospital Boiler	
140	3.81	Housing	1943-1944	Base Housing Units	
141	0.74	No Building	-- --	No Building	
142	3.3	38	1944	Community Service, Gym	
		103	1944	Bowling Alley	
143	4.59	125A	Pre-1965	Hotwell	
		125C	Pre-1965	Pumphouse	
		Shed	Unknown	Shed for Well 1, Well 1 Equipment	
144	7.64	25	Pre-1949	Quarters	X
		26A	Pre-1949	Quarters	X
		26B	Pre-1949	Quarters	X
		27	Pre-1949	Occupational Therapy, Quarters	X
		28	Pre-1949	Quarters	X
		31	Pre-1949	Recreation Building	X
		32	Pre-1949	Bag Storage	X
		39	Pre-1949	Library	X
		123	Pre-1949	Quarters	X
		124	Pre-1949	Quarters	X
		129	Pre-1949	Quarters	X
		132	Pre-1949	Animal Housing, Cold Storage, Class Rooms	X
		135	Pre-1949	Quarters	X
145	4.51	127	Pre-1949	Quarters	X
146	2.23	16A	Pre-1949	Water Distribution Pumphouse	X
		16B Rebuilt	1978	Sentry House, Main Gate	X
		16C	Pre-1949	Marine Detachment	X
		16D	1965	Liberty and Visitor's Pass Office	X
147	0.49	102	1945	Security, Machine Shop	
148	3.24	86	Pre-1949	Storehouse	X
		131	1945	Administration Offices	
		133	1945	Command Education, Archives, Excess Property	

**TABLE 2-1 (CONTINUED)**  
**PROPERTY DESCRIPTION**  
**NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Acres	Building Number	Year Built	Building Description/Former Use	Demolished
149	4.72	23	Pre-1949	Quarters	X
		24	Pre-1949	Quarters	X
		501	1970	Bachelors Enlisted Quarters	
150	1.71	29	Pre-1949	Quarters	X
		35	Pre-1949	Quarters	X
151	2.46	33	Pre-1949	Medical Storehouse	X
		104	Pre-1949	Storage	X
		125B	1945	Hotwell and Pumphouse	X
		214	1951	Service Station	X
		Shed	~ 1965	Temporary Storage (Near Building 214)	X
152	2.88	Guard Shack	Unknown	Guard Shack	
		Shed E of Building #88	Pre-1949	Paint, Oil Shed	
153	0.25	No Building	-- --	No Building	
154	0.12	22	1942	Former Facility Boiler Plant (Hazardous Materials Storage)	
155	0.05	88	1951	Storage, Furniture, Junk	X
156	0.57	20A	Pre-1949	Gardener's Group	
157	0.34	20B	1942	Office (Landscape Contractor)	
		20C	1945	Storage (Garden Supplies)	
		21	Pre-1949	Gardener's Group, Lath House	X
158	1.74	136	1943	Storehouse (Liquor Store)	X
		137	1944	Chlorine and Pump Building, Swimming Pool	
		138	1944	Swimming Pool	
159	1.19	90	1954	Storage (Oil)	X
		111	1945	Transportation Office	
		112	1945	Vehicle Repair Shop	
		113	1945	Storage (Vehicles)	
		114	1945	Storage, Conservation Corp.	
		116	1943	Storage (Vehicles)	
		117	~ 1949	PWC Service Station	X

**TABLE 2-1 (CONTINUED)**  
**PROPERTY DESCRIPTION**  
**NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Acres	Building Number	Year Built	Building Description/Former Use	Demolished
		117P	Pre-1965	Service Station	X
		141	Unknown	Transportation Area	X
		Shed	Unknown	Houses Air Compressor	
160	2.39	No Building	-- --	No Building	
161	7.86	84	Pre-1949	Storehouse	X
		134	~ 1949	Storehouse	X
		147	1945	Racquetball Courts	
		150	1959	Covered Picnic Area	
		507	1979	Restrooms	
		Shed	Unknown	Athletic Equipment Shed (Adjacent to Dugout at First Base Line)	
		Shed	Unknown	Athletic Equipment Shed (Adjacent to Dugout at Third Base Line)	
		Shed	Unknown	Athletic Equipment Shed/Concession Booth (Behind Home Plate)	
162	4.98	18	1924	Officers and Enlisted Personnel Open Mess	
		19	1942	Garage (Two Car; Adjacent to Building 18)	
		118	Pre-1949	Quarters	X
163	1.27	70	1943	Alcohol Rehabilitation	

Notes:

~ Approximately

PWC Navy Public Works Center

TABLE 2-2

**SUMMARY OF UNDERGROUND UTILITIES  
NAVAL MEDICAL CENTER, OAKLAND**

<b>Parcel</b>	<b>Storm Drain</b>	<b>Sanitary Sewer</b>	<b>Water</b>	<b>Natural Gas</b>	<b>Electrical</b>	<b>Steam</b>
101			X			
102			X	X	X	
103			X			
104	X		X	X		X
105			X			
106			X			
107		X	X	X	X	X
108		X	X			
109	X	X	X		X	
110	X	X	X	X		
111			X	X	X	
112						
113			X			
114		X	X	X		
115			X			
116		X	X	X		
117			X	X		
118			X		X	
119						
120			X			
121			X			X
122			X	X		X
123	X	X	X	X		X
124	X		X	X		
125	X	X	X	X		
126			X			
127			X			X
128		X	X	X		X
129			X			X

**TABLE 2-2 (CONTINUED)**

**SUMMARY OF UNDERGROUND UTILITIES  
NAVAL MEDICAL CENTER, OAKLAND**

<b>Parcel</b>	<b>Storm Drain</b>	<b>Sanitary Sewer</b>	<b>Water</b>	<b>Natural Gas</b>	<b>Electrical</b>	<b>Steam</b>
130	X	X	X	X		X
131		X	X	X		
132		X	X	X		X
133		X	X	X		X
134	X	X	X	X		X
135	X	X	X			X
136		X	X	X	X	
137	X	X	X	X	X	X
138	X		X	X		X
139		X	X	X		
140			X	X		
141				X		X
142	X	X	X	X		
143	X	X		X	X	X
144	X	X	X	X	X	
145			X	X		
146		X	X	X		
147		X	X			X
148		X	X	X	X	X
149			X	X	X	X
150			X			
151		X	X	X		X
152			X			X
153						
154			X	X	X	X
155					X	
156		X	X	X		X
157		X	X			X
158	X	X	X	X		X
159		X	X		X	X
160	X	X	X			X

**TABLE 2-2 (CONTINUED)**

**SUMMARY OF UNDERGROUND UTILITIES  
NAVAL MEDICAL CENTER, OAKLAND**

<b>Parcel</b>	<b>Storm Drain</b>	<b>Sanitary Sewer</b>	<b>Water</b>	<b>Natural Gas</b>	<b>Electrical</b>	<b>Steam</b>
161			X	X		
162			X	X		
163		X	X	X		X

Note:

X      The underground utility is present

**TABLE 3-1**  
**SUMMARY OF PARCEL REUSE AND CONVEYANCE**  
**NAVAL MEDICAL CENTER, OAKLAND**

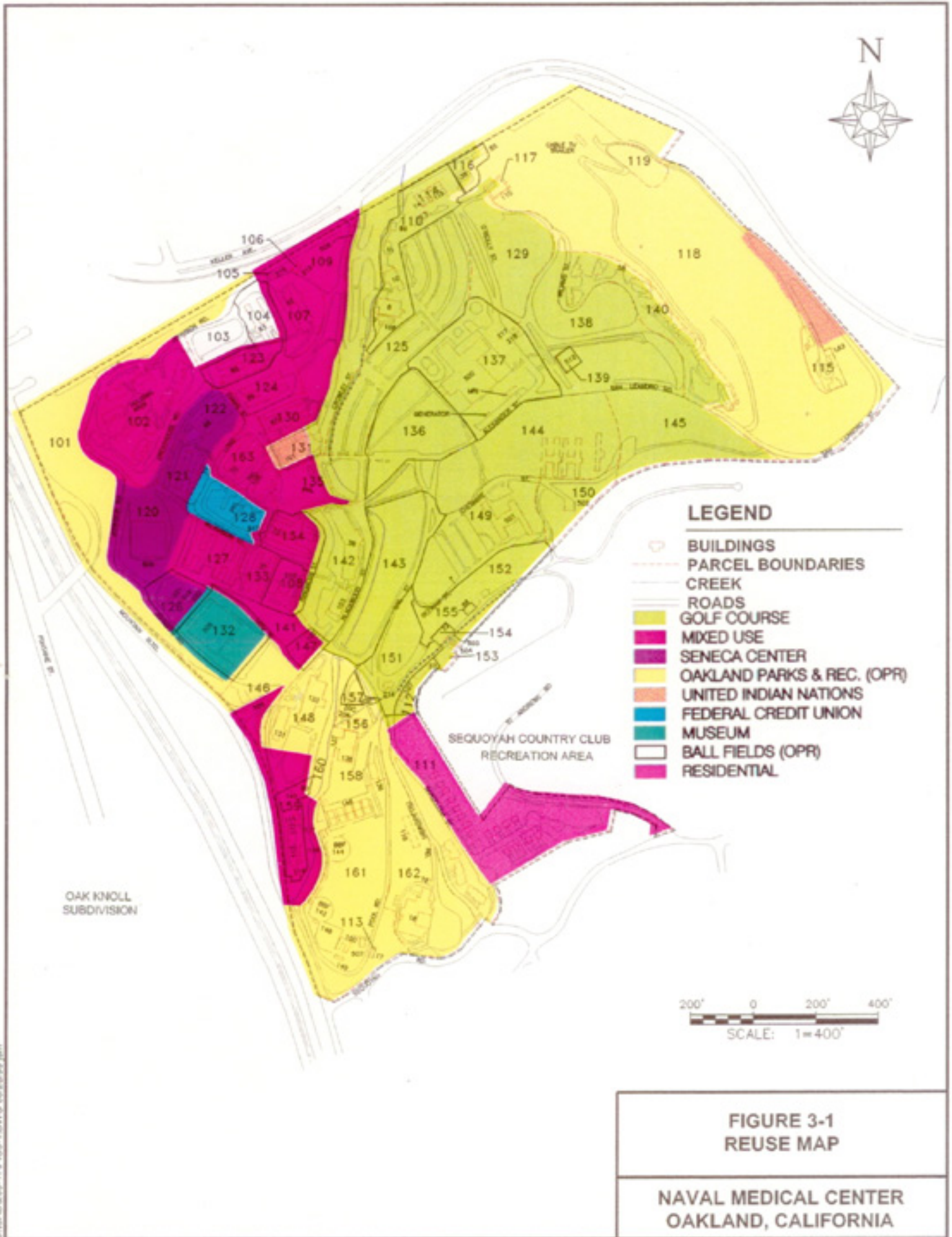
<b>Parcels</b>	<b>Reuse (Conveyance)</b>
101, <b>102</b> , 103, 104, <b>111</b> , 113, <b>115</b> , <b>118</b> , 119, <b>146</b> , 148, 156, 157, 158, <b>160</b> , 161, and 162	Oakland Parks and Recreation (public benefit conveyance)
<b>102</b> , 105, 106, 107, 108, 109, 123, 124, 127, <b>128</b> , 130, 133, 134, <b>135</b> , 141, <b>146</b> , 147, 159, <b>160</b> , and 163	Mixed, commercial, and residential use (negotiated sale or public sale)
110, 112, 114, 116, 125, 129, <b>135</b> , 136, 137, 138, 139, 140, 142, 143, 144, 145, 149, 150, 151, 152, 153, 154, and 155	Golf course and residential (negotiated sale or public sale)
<b>111</b>	Residential (negotiated sale or public sale)
<b>115</b> , <b>118</b> , and 131	United Indian Nations/Native Americans (public benefit conveyance)
120, 121, 122, and 126	Seneca Center and Center for Adolescent Emotional Health (public benefit conveyance)
<b>128</b>	Federal Credit Union (negotiated sale)
132	Storage of Artifacts for the City of Oakland Museum (public sale)

Note:

**BOLD** numbers are parcels with property to be transferred under more than one conveyance.

The conveyance methods listed represent the proposed disposal plan. The Navy has yet to make specific disposal decisions for the NMCO property.

For the parcels designated in Section 7.0 as environmental condition of property (ECP) area type 1 or ECP area type 3, by definition, these parcels are suitable for unrestricted use. For the parcels designated as ECP area type 2, the release of petroleum products was either at levels below residential action levels or was remediated to levels below residential action levels; ECP area type 2 parcels are also available to transfer for unrestricted use.



#### **4.0 REGULATORY AGENCY COORDINATION**

Representatives from the U.S. Environmental Protection Agency (EPA), the California Environmental Protection Agency's Department of Toxic Substances Control (DTSC), and the Regional Water Quality Control Board (RWQCB) met with the Navy on April 9, 1997 to discuss the scope of the NMCO FOST activities. Representatives from these agencies were provided workable draft documents to facilitate their continuing consultative role in developing the FOST. Regulatory comments were reviewed and addressed or incorporated, as appropriate.

#### **5.0 NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE**

A joint Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) was prepared for the Navy disposal and community reuse of the properties at NMCO in accordance with the requirements of the National Environmental Policy Act (NEPA), California Environmental Quality Act, and the Navy's environmental and natural resources program manual (OPNAVINST 5090.1B). The final EIS/EIR document was completed April, 1998 and shall accompany this FOST. On August 17, 1998, the Navy issued a record of decision for the disposal and reuse of NMCO, completing the NEPA process.

#### **6.0 SUMMARY OF ENVIRONMENTAL FINDINGS**

The following sections present a summary of the environmental findings at NMCO regarding storage tanks (Sections 6.1 and 6.2), the former hydraulic lift at Parcel 159 (Section 6.3), asbestos-containing materials (Section 6.4), lead-based paint (Section 6.5), polychlorinated biphenyls (Section 6.6), radon (Section 6.7), pesticides (Section 6.8), radioactive materials (Section 6.9), medical debris removal from private property adjacent to NMCO (Section 6.10), silver recovery unit (Section 6.11), and groundwater wells (Section 6.12).

##### **6.1 UNDERGROUND STORAGE TANKS**

A total of 20 underground storage tank (UST) sites were investigated on parcels 108, 110, 115, 132, 137, 139, 151, 154, and 159 at NMCO (parcels may contain more than one UST). Eighteen USTs at NMCO have been removed. At the two remaining sites (in Building 12 at Parcel 110), suspected UST sites were investigated to reveal that no tank existed. All 18 UST sites at NMCO have received RWQCB closure notification. The location, tank identification, capacity, contents, and status of each UST formerly

located at NMCO are summarized in Table 6-1. In addition, those sites that contain residual contamination from petroleum products are also identified in Table 6-1. Reports which have been referenced in the UST closure letters are included in the reference list presented in Section 1.0 (PWC 1997, PRC 1994, PWC 1996, ERM-West 1996, and PRC 1996).

**Notifications.** This section serves as a notification that the following UST sites at NMCO contain residual contamination from petroleum products.

Parcel #	Tank ID
108	510A,-B,-C,-D
115	L63D, -E
132	505A
137	500A
139	512A
151	214A
154	22-1,-2
159	141-A, -B

The levels of residual contamination are of no significant impact and the tanks meet the low-risk criteria for closure as identified in the San Francisco Bay RWQCB closure letters. For specific information on the individual sites, refer to the individual reports for the sites. This information may be found at the San Francisco Bay RWQCB records. Also, files are maintained at EFA West or its successor command.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to USTs at NMCO.

TABLE 6-1

**UNDERGROUND STORAGE TANK INVENTORY  
NAVAL MEDICAL CENTER, OAKLAND**

	Tank ID	Location (Building)	Former Land Use	Future Land Use	Capacity (Gallons)	Contents	Status	Comments
108	510A	510	Former Service Station	Mixed Use	10,000	Gasoline	Removed	RWQCB Closure Letter (6/20/97)**
108	510B	510	Former Service Station	Mixed Use	10,000	Gasoline	Removed	RWQCB Closure Letter (6/20/97)**
108	510C	510	Former Service Station	Mixed Use	10,000	Gasoline	Removed	RWQCB Closure Letter (6/20/97)**
108	510D	510	Former Service Station	Mixed Use	550	Waste Oil	Removed	RWQCB Closure Letter (12/94)**
110	12-1	12 <sup>a</sup>	Service Station	Golf Course	Unknown	Unknown	NA	Old Service Station Boiler/No UST Found Upon Excavation*
110	12-2	12 <sup>a</sup>	Service Station	Golf Course	Unknown	Unknown	NA	Old Service Station Boiler/No UST Found Upon Excavation*
115	L63D	Officers Res.	Housing	United Indian Nations	750	Diesel	Removed	RWQCB Closure Letter (8/27/97)**
115	L63E	Officers Res.	Housing	United Indian Nations	750	Diesel	Removed	RWQCB Closure Letter (8/27/97)**
132	505A	505	Warehouse/Supplies	Oakland Museum	500	Diesel	Removed	RWQCB Closure Letter (7/10/97)**
137	500A	500	Hospital	Golf Course	5,000	Diesel	Removed	RWQCB Closure Letter (7/10/97)**
139	512A	512	Hospital Boiler	Golf Course	20,000	Diesel	Removed	RWQCB Closure Letter (7/10/97)**
151	214A	214	Service Station	Golf Course	6,000	Gasoline	Removed	RWQCB Closure Letter (8/27/97)**
151	214B	214	Service Station	Golf Course	6,000	Gasoline	Removed	RWQCB Closure Letter (8/27/97)**
151	214C	214	Service Station	Golf Course	8,000	Gasoline	Removed	RWQCB Closure Letter (8/27/97)*
151	214D	214	Service Station	Golf Course	Unknown	Petroleum	Removed	RWQCB Closure Letter (8/27/97)*
154	22-1	22	Boiler Plant	Golf Course	Unknown	Diesel	Closed	RWQCB Closure Letter (8/27/97)**

TABLE 6-1 (Continued)

**UNDERGROUND STORAGE TANK INVENTORY  
NAVAL MEDICAL CENTER, OAKLAND**

	Tank ID	Location (Building)	Former Land Use	Future Land Use	Capacity (Gallons)	Contents	Status	Comments
154	22-2	22	Boiler Plant	Golf Course	Unknown	Diesel	Closed	RWQCB Closure Letter (8/27/97)**
159	111-A	117	Service Station/Transformer Area	Mixed Use	8,000	Petroleum	Removed	RWQCB Closure Letter (12/94)*
159	141-A	141	Service Station/Transformer Area	Mixed Use	10,000	Gasoline	Removed	RWQCB Closure Letter (7/10/97)**
159	141-B	141	Service Station/Transformer Area	Mixed Use	6,000	Diesel	Removed	RWQCB Closure Letter (7/10/97)**

**Notes:**

\*These former UST sites have no residual contamination from petroleum products.

\*\*These former UST sites have residual contamination from petroleum products. The levels of residual contamination are of no significant impact and the tanks meet the low-risk criteria for closure as identified in the RWQCB closure letters.

\*Building 12 in Parcel 110 has been demolished.

NA

No UST found upon excavation.

RWQCB Regional Water Quality Control Board

UST Underground Storage Tank

This serves as notification that future land use may change from land use at the time of UST closure.

## 6.2

### ABOVEGROUND STORAGE TANKS

Six aboveground storage tanks (AST) were located on parcels 110, 137, and 153 at NMCO. Four of the six ASTs have been removed. Two will remain at NMCO, empty and inactive. The location, capacity, contents and status of each AST currently or formerly located at NMCO are summarized in Table 6-2.

**Notifications.** For the purpose of this transfer, no notifications are required with respect to ASTs at NMCO.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to ASTs at NMCO.

**TABLE 6-2**

#### ABOVEGROUND STORAGE TANK INVENTORY NAVAL MEDICAL CENTER, OAKLAND

Parcel	Location (Building)	Former Land Use	Future Land Use	Capacity (Gallons)	Contents	Status
110	108	Boiler	Golf Course	300	Diesel Fuel	Removed
110	108	Boiler	Golf Course	300	Diesel Fuel	Removed
137	500	Hospital	Golf Course	500	Diesel Fuel	Inactive
154	22	Former Boiler Plant	Golf Course	10,000	Diesel Fuel	Removed
154	22	Former Boiler Plant	Golf Course	10,000	Diesel Fuel	Removed
154	22	Former Boiler Plant	Golf Course	Unknown	None; tank was not active	Inactive

This serves as notification that future land use may change from land use at the time of AST removal.

## 6.3

### FORMER HYDRAULIC LIFT AT PARCEL 159

In August of 1996, the Navy removed the hydraulic lift near Building 111 in Parcel 159; Parcel 159 had formerly been the facility's motor pool. The lift was approximately the size of an average home hot water heater with a capacity of about 66 gallons (too small to be regulated under Title 23, Division 3, Chapter 16). During the removal of the lift, soil samples were collected and analyzed for total petroleum hydrocarbons (TPH)-gasoline/diesel mixture, benzene, toluene, ethylbenzene, xylene (BTEX), polychlorinated biphenyl (PCBs), and metals. Elevated concentrations of lead and TPH-gasoline/diesel mixture were identified in the excavation area (SSPORTS 1997). As a result, approximately 80 cubic

yards of soil were removed and additional soil samples were collected and analyzed for TPH-hydraulic fluid, BTEX, and PCBs; a minnow bioassay was also conducted on soil samples collected from the creek bank adjacent to the excavation area. The data from these additional samples indicated that petroleum contaminated soils remain outside the excavated area on the banks of Rifle Range Creek (Parcel 160); however, results of the minnow bioassay indicated that adverse ecological impacts to the creek had not occurred. Based on the criteria analysis report (SSPORTS 1997), the California Department of Fish and Game (DFG), Office of Spill Prevention and Response (OSPR), recommended additional investigations be conducted to evaluate the potential for contaminant migration and the use of a more sensitive species to evaluate potential ecological impacts at the site (OSPR 1997).

In 1998, the Navy conducted sampling to evaluate the potential impact of petroleum hydrocarbons on frog embryos (TtEMI and U&A 1998). Two rounds of soil and sediment sampling were conducted within the creek bed and along the bank of Rifle Range Creek. Based on the results and observations from these and previous sampling rounds, a petroleum release from Parcel 159 (Building 111, the Hydraulic Lift) to Parcel 160 (Rifle Range Creek) does not appear to have occurred. Concentrations of TPH detected in the creek appear to be similar to concentrations detected previously and at upstream locations; these concentrations are most likely representative of ambient conditions. In addition, concentrations of TPH in the creek were not sufficient to elicit a statistically significant adverse effect on frog embryos (TtEMI and U&A 1999). These conclusions were supported by OSPR in their letter to the RWCQB dated April 2, 1999 (OSPR 1999) noting that, "DFG concludes that there is no increased risk to ecological receptors of concern in the creek adjacent to the former hydraulic lift." Also, contaminant migration of residual concentrations of TPH via groundwater was found to be unlikely as the water table is substantially below the level of the creek bottom. Groundwater was not encountered at 46 feet below ground surface at a boring installed 40 feet west of Rifle Range Creek, adjacent to Building 111 (PRC 1994). The area is also highly vegetated, thus, mitigating overland runoff and improving bank stability. However, in light of the El Nino winter of 1998, the RWQCB recommends that the new property owner monitor bank stability.

Based on this information, Parcel 159 is reclassified as environmental condition of property (ECP) area type 2-4 because petroleum remediation has been completed and there is no risk to human health or the environment. Parcel 160 remains classified as ECP area type 3 due to previously detected concentrations of pesticides below action levels (TtEMI and U&A 1996). Parcels 159 and 160 are suitable for transfer in their current condition (TtEMI and U&A 1999).

**Notifications.** This section serves as a notification that residual concentrations of TPH exist at depths between 12 and 14 feet from the top of the slope at Parcel 159. The residual concentrations were measured in 1997. Due to biodegradation and natural attenuation, it is likely that the concentrations measured in 1997 have decreased substantially. The U.S. Environmental Protection Agency, the California Department of Toxic Substances Control, the California Department of Fish and Game, and the California Regional Water Quality Control Board have been involved in studies to evaluate potential risk to human health and the environment from these residual concentrations. The following reasons are the basis for the conclusion that there is no anticipated impact to human health or the environment from TPH concentrations remaining at the parcel:

- 1) studies on frog embryos showed no statistically significant impacts associated with residual TPH concentrations,
- 2) TPH concentrations in the creek bank measured in December 1998 do not significantly differ from ambient levels, and
- 3) residual concentrations of TPH are not migrating.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to the former hydraulic lift at Parcel 159.

#### **6.4 ASBESTOS-CONTAINING MATERIALS**

In December 1994, a comprehensive asbestos survey (MINS 1994) was conducted for non-housing facilities at NMCO. Friable, accessible or damaged asbestos-containing materials (ACM) were identified in Buildings 8, 11, 14, 18, 22, 70, 73, 110, 111, 115, 131, 501, 20B, and in a pipe outside of Building 22 at NMCO. Within these buildings, friable, accessible and damaged ACM has been removed or encapsulated (MINS 1995 and PWC 1997). Building- and parcel-specific asbestos survey and asbestos abatement information for non-housing facilities is presented on Tables 6-3 and 6-4, respectively. In March 1996, an asbestos survey for residential units was conducted by the Navy Public Works Center, Norfolk, Virginia (PWC 1996). Results of the survey indicated that identified ACM are nonfriable or friable but in good condition with no damage, therefore asbestos abatement is not required; operations and maintenance programs were recommended.

**Notifications.** This section serves as a notification that asbestos-containing materials exist in buildings at NMCO. This asbestos-containing material currently poses no human health or environmental

TABLE 6-3

**ASBESTOS SURVEY SUMMARY OF FINDINGS FOR NON-RESIDENTIAL BUILDINGS  
NAVAL MEDICAL CENTER, OAKLAND**

Building Number	Parcel	Asbestos			Recommended Action
		Susp.	TSI	Misc.	
8	110		F	F	Abatement and O&M
9	110			NF	O&M
10	110		F	F	O&M
11	110			F	Abatement and O&M
13	110			F	O&M
14	114	NF	F	F	Abatement and O&M
17	113			NF	O&M
18	162	NF	F	F	Abatement and O&M
19	162			NF	O&M
20B	157		F	F	Abatement and O&M
20C	157			NF	Abatement and O&M
22	154		F	NF	Abatement and O&M
36	116			F	O&M
37	112			NF	O&M
38	142			NF	O&M
62	107			NF	O&M
63	104			NF	O&M
65	123			F	O&M
66	124			NF	O&M
67	130			NF	O&M
69	122			NF	O&M
70	163		F	NF	Abatement and O&M
73	134		F	NF	Abatement and O&M
75	133	NF		NF	O&M
85	116			NF	O&M
88	155				None

TABLE 6-3 (CONTINUED)

**ASBESTOS SURVEY SUMMARY OF FINDINGS FOR NON-RESIDENTIAL BUILDINGS  
NAVAL MEDICAL CENTER, OAKLAND**

Building Number	Parcel	Asbestos			Recommended Action
		Susp.	TSI	Misc.	
89	110			NF	O&M
90	159			NF	O&M
101	131			NF	O&M
102	147			NF	O&M
103	142			NF	O&M
107	112			NF	O&M
108	110			F	O&M
110	117			F	Abatement and O&M
111	159		F	NF	Abatement and O&M
112	159			NF	O&M
113	159			NF	O&M
114	159			NF	O&M
115	114		F	F	Abatement and O&M
116	159			NF	O&M
131	148		F	NF	Abatement and O&M
133	148			NF	O&M
137	158			NF	O&M
138	158			NF	O&M
147	161			NF	O&M
150	161			NF	O&M
215	106			NF	O&M
216	105			NF	O&M
217	137			NF	O&M
218	137			NF	O&M
223	137				None
500	137	NF		NF	O&M
501	149		F	NF	Abatement and O&M
505	132			NF	O&M

**TABLE 6-3 (CONTINUED)**

**ASBESTOS SURVEY SUMMARY OF FINDINGS FOR NON-RESIDENTIAL BUILDINGS  
NAVAL MEDICAL CENTER, OAKLAND**

Building Number	Parcel	Asbestos			Recommended Action
		Susp.	TSI	Misc.	
507	161			NF	O&M
508	109			NF	O&M
510	108			NF	O&M
511	128	NF		NF	O&M
512	139			NF	O&M
519	126			NF	O&M
520	126				None
521	126				None
Pipe	110		F		Abatement and O&M
Shed				NF	O&M

Notes:

S Surfacing  
 TSI Thermal System Insulation  
 Misc Miscellaneous - asbestos found in buildings that was neither surfacing nor thermal systems insulation  
 F Friable  
 NF Non-friable  
 O&M Operations and maintenance  
 Susp. Suspect  
 Information based on MINS 1994

TABLE 6-4

**ASBESTOS ABATEMENT AT NON-RESIDENTIAL BUILDINGS  
NAVAL MEDICAL CENTER, OAKLAND**

<b>Building Number</b>	<b>Parcel</b>	<b>Asbestos Survey Results</b>	<b>Remedial Action Taken</b>
8	110	Friable asbestos identified	Cleaned, Repaired, and Encapsulated
11	110	Friable asbestos identified	Cleaned, Repaired, and Encapsulated
14	114	Friable and nonfriable asbestos identified	Cleaned, Repaired, and Encapsulated
18	162	Friable and nonfriable asbestos identified	Cleaned, Repaired, and Encapsulated
20B	157	Friable asbestos identified	Cleaned, Repaired, and Encapsulated
22	154	Friable and nonfriable asbestos identified	Cleaned, Repaired, and Encapsulated
70	163	Friable and nonfriable asbestos identified	Cleaned, Repaired, and Encapsulated
73	134	Friable and nonfriable asbestos identified	Cleaned, Repaired, and Encapsulated
110	117	Friable asbestos identified	Cleaned, Repaired, and Encapsulated
111	159	Friable and nonfriable asbestos identified	Cleaned, Repaired, and Encapsulated
115	114	Friable asbestos identified	Cleaned, Repaired, and Encapsulated
131	148	Friable and nonfriable asbestos identified	Cleaned and Repaired or Removed and Encapsulated
501	149	Friable and nonfriable asbestos identified	Cleaned, Repaired, and Encapsulated
Pipe	110	Friable asbestos identified	Cleaned, Repaired, and Encapsulated

Notes:

Information based on MINS 1995 and PWC 1997

problems; however, if the asbestos-containing material is not managed in compliance with the site operations and maintenance plan, and applicable local, state, and Federal laws and regulations, it may become a hazard. The transferee will assume responsibility for the management of any ACM in accordance with applicable local, state, and Federal laws and regulations.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to ACM at NMCO.

## **6.5 LEAD-BASED PAINT**

Lead-based paint (LBP) hazards are defined in the Federal Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of P.L. 102-550, Act), as codified in 42 USC Section 4822 (Act) as “any condition that causes exposure to lead ... that would result in adverse health effects.” Lead exposure is especially harmful to young children and pregnant women. The Act provides for regulation of the abatement of lead hazards from LBP, lead contaminated dust and lead contaminated soil for residential structures only. The Act refers to residential structures constructed before 1978 as target housing. The seller must disclose known lead-based paint or lead-based paint hazards on residential housing built before 1978, per EPA 40 Code of Federal Regulations (CFR) Part 745, and HUD 24 CFR Part 35.

The Navy is required by the Act and subsequent Department of Defense (DOD) base realignment and closure guidelines (“Asbestos, Lead Paint, and Radon Policies at BRAC Properties,” memorandum from the Office of the Under Secretary of Defense, October 31, 1994) to survey and abate LBP hazards on target housing constructed before 1960. The DOD guidelines also stipulate that LBP surveys be conducted at target housing constructed between 1960 and 1978. No survey or abatement is required to be conducted at housing constructed after 1978. If a non-housing structure is identified by the reuse plan for future use as housing, the appropriate measures would be taken by the Navy depending on the age of the structure. However, one of the exceptions to the DOD Policy is that inspection and/or abatement of target housing is not required if the building is scheduled for demolition.

### **6.5.1 Residential**

According to the Act, the term “residential” includes any house, apartment, or structure intended for human habitation. In addition, Navy practice (“Lead-Based Paint at BRAC Installations,” prepared by Commander, Naval Facilities Engineering Command, Letter 5090 41CM/960102 April 16, 1996) is to treat structures which would typically accommodate children under 6 years of age for extended periods of

time, such as a child care facility, elementary school, or playground in the same manner as target housing, although the law does not specifically address them as such.

The “Lead-Based Paint Inspection of Family Housing Units at Naval Medical Center Oakland,” dated April 14, 1996, presents the results of lead sampling for the existing housing units at NMCO, conducted by the Navy Public Works Center, Norfolk, VA, in accordance with guidelines set forth by the U.S. Department of Housing and Urban Development. The survey indicates that lead-based paint is present on surfaces and in soil in residential areas (Table 6-5). Removal of elevated levels of lead in soil was recommended at the Barcelona and Santa Cruz housing units. This soil removal was completed in September 1997 (IT 1997).

The Oakland Base Reuse Authority (OBRA) Final Reuse Plan for the Naval Medical Center, dated August 1996, which was approved by OBRA in July 1996 indicates that there is no residential reuse planned for the following housing developments: Duplex Officer’s Quarter’s (Williams housing units), Officers Quarters (Quarters D and E), and Johnson’s Circle. Therefore, these are treated as non-residential areas and are therefore not subject to the DOD policy on LBP. The only areas planned for residential reuse are the Barcelona/Santa Cruz areas. However, since the soil lead levels in some areas surrounding Quarters D and E were elevated above EPA action levels, the Navy removed the soil from these areas (SSPORTS 1999).

**Notifications.** This section serves as a notification that lead-based paint exists in residential buildings constructed before 1978 at NMCO which are part of this FOST. Lead exposure is especially harmful to young children and pregnant women. For purposes of this transfer, the transferee shall comply with all applicable Federal, state, and local laws and regulations relating to LBP. In accordance with 24 CFR, Part 35 and 40 CFR, Part 745, at the time of transfer, the disclosure information on lead-based paint and/or lead-based paint hazards shall include the elements in the “Sample Form for Transfer of Residential Dwellings” as shown in Appendix A. The disclosure information will contain the following:

- Statement by the Navy disclosing the presence of lead-based paint and/or lead-based paint hazards in paragraph (a)(i) of Appendix A:  
  
“This section serves as a disclosure that lead-based paint exists in residential buildings built prior to 1978 at NMCO which are part of this FOST. The basis for the determination that lead-based paint and/or lead-based paint hazards exists in the housing, the location of the lead-based

paint and/or lead-based paint hazards, and the conditions of the painted surfaces are contained in the reports listed below.”

- The notice, in accordance with 24 CFR 35.88, shall include all reports available pertaining to lead-based paint and/or lead paint hazards in the housing area and will include the following documents to be listed in paragraph (b)(i) of Appendix A:
  - (1) “Lead Management Plan” for Barcelona/Santa Cruz Housing (PWC Norfolk 1996)
  - (2) “Removal Action for Lead Contamination in Soil for Barcelona/Santa Cruz Housing” (IT 1997)
- A lead hazard information pamphlet in accordance with the Residential Lead-Based Paint Hazard Reduction Act and 24 CFR Part 35 titled “Protect Your Family From Lead in Your Home” (EPA#747-K-94-001) as noted in paragraph (d) of Appendix A.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to LBP in residential housing at NMCO.

#### **6.5.2 Non-Residential**

Under the Act, Federal agencies are subject to all Federal, State, and local requirements respecting LBP and LBP hazards (15 USC 2688). Currently, there are no Federal, state, or local requirements for surveying and abating LBP in non-residential facilities.

Prior to 1978, the use of lead-based paint was common throughout the United States, including at military installations. The use of lead-based paint, and the lead in the paint, was significantly higher prior to 1960 than later, and higher still prior to 1950. Based on the sampling performed above there is a likelihood that lead-based paint is present in non-residential structures. It is also likely that there is lead from lead-based paint on the soil near the structure, through the action of normal weathering and maintenance (e.g. scraping and repainting) over the years.

If EPA or a state develops generally applicable standards for the land uses permissible under the deed that require remediation of lead-based paint beyond that performed prior to the transfer of the property, then in accordance with the DOD’s Future Land Use Policy and with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 120(h)(3)(A), EPA expects the Navy to perform or assure the performance of any additional remedial action found to be necessary with respect to lead from lead-based paint released to the soil during the ownership of the property by the Navy.

It is DTSC's and EPA's position that contamination of soil resulting from LBP constitutes a CERCLA release. Further, to transfer such property and satisfy the requirements under 120(h)(3) of CERCLA that "...all remedial action necessary to protect human health and the environment has been taken," the potential for soil contamination from LBP must be evaluated and necessary remedial actions taken. DTSC performed reconnaissance soil sampling and analysis for lead in non-residential areas in August 1997; results of these analyses are presented on Table 6-6. As a follow-up to the reconnaissance sampling, DTSC proposed limited sampling to assess whether lead in soil is present at concentrations that could pose unacceptable risks to future users in areas not previously used for residential purposes, but for which the reuse plan includes mixed use. An approach that was mutually acceptable to DTSC and the Navy was documented in a letter dated July 22, 1998 from Mr. Henry Gee (EFA West) to Mr. Anthony Landis (DTSC).

In August 1998, DTSC sampled for LBP at one current building (Building 67, Parcel 130) and at an empty site on which a former industrial building (Building 73, Parcel 134) was located. The results are presented in Tables 6-7 and 6-8 for Buildings 67 and 73 respectively, and ranged from 40.8 mg/kg to 777 mg/kg for the former building and 229 mg/kg to 674 mg/kg for the current building. The average values were 252 mg/kg and 472 mg/kg, respectively. Based on these data, DTSC concluded that the parcels designated for "mixed use" at NMCO will not present a risk to human health or the environment after the existing buildings have been demolished and the parcel regraded. DTSC also concluded that the parcels may be released for unrestricted use (DTSC 1998).

**Notifications.** The notification for the transfer document, i.e. the contract for sale, EDC agreement or deed, is the following:

This section serves as a notification that lead-based paint does exist in non-residential buildings at NMCO. Lead exposure is especially harmful to young children and pregnant women. Buildings constructed before 1978 may contain LBP. The recipient and its successor shall not permit the use, occupancy, demolition, renovation, or residential habitation of any structure unless the recipient and its successor complies with all applicable Federal, state, and local laws relating to LBP. Residential structures are defined as any house, apartment, or structure intended for human habitation, including but not limited to a non-dwelling facility commonly used by children under 6 years of age such as a child care center, elementary school, or playground.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to LBP in non-residential buildings at NMCO.

TABLE 6-5

**LEAD-BASED PAINT AT EXISTING HOUSING FACILITIES  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Building Community (year built)	Lead Hazard			Comments
		Paint	Soil <sup>a</sup>	Dust	
102	Johnson Circle (1969)	X			Eleven components have LBP on surfaces. Interior: LBP hazard exists where minor damage found on surfaces. Exterior: Surfaces contain minor damage and require repair and maintenance. Not planned for residential reuse per the approved reuse plan.
111	Barcelona Santa Cruz (1974)	X	X		Two components have LBP on surfaces. Interior: All LBP intact/minimum hazard. Exterior: Downspouts on all units contain LBP above action levels. Lead in soil up to 1,684 ppm. Remediation of lead in soil completed in summer 1997 (IT 1997).
115	Officer Quarters D Williams (1943-1944)		X		Twenty-five components have LBP on surfaces. All interior and exterior paint intact. Lead in soil up to 1,260 ppm. Reuse of these quarters will not be residential per the approved reuse plan. Remediation of lead in soil completed February 1999 (SSPORTS 1999).
115	Officer Quarters E Williams (1943-1944)				Twenty-seven components have LBP on surfaces. All interior and exterior paint intact. Lead in soil up to 519 ppm. Reuse of these quarters will not be residential per the approved reuse plan. Remediation of lead in soil completed February 1999 (SSPORTS 1999).
140	Duplex Officer Quarters (1956)	X	X	X	Forty components have LBP on surfaces. Interior: LBP hazard exists where minor damage found on surfaces with high potential for contact with children. Exterior: LBP hazards at doorways and all windows. Lead in soil up to 451 ppm. One unit has lead in dust above recommended limits. Demolition of these quarters is anticipated per the approved reuse plan.
140	Officer Quarters A Williams (1943-1944)	X	X		Eighteen components have LBP on surfaces. Interior: Stairway contains LBP above action levels. Exterior: LBP hazards at doorways and all windows. Lead in soil up to 447 ppm. Demolition of these quarters is anticipated per the approved reuse plan.
140	Officer Quarters B Williams (1943-1944)				Twenty-five components have LBP on surfaces. Interior: All paint intact. Exterior: Major damage at paint surfaces which require repair and maintenance. Demolition of these quarters is anticipated per the approved reuse plan.
140	Officer Quarters C Williams (1943-1944)		X		Fourteen components have LBP on surfaces. Interior: All paint intact. Exterior: Major damage at paint surfaces that require repair and maintenance. Lead in soil up to 1,403 ppm. Demolition of these quarters is anticipated per the approved reuse plan.

Notes:

<sup>a</sup>Hazard defined as lead in soil at concentrations above action levels (400 ppm)

LBP Lead-based paint

Ppm Parts per million

## **6.6 POLYCHLORINATED BIPHENYLS**

The Navy Public Works Center conducted a PCB survey and sampling program for oil-filled electrical equipment at NMCO in the early 1980s. PCB equipment is legally defined as equipment with oils containing PCBs in excess of 500 parts per million (ppm). "PCB-contaminated" equipment is legally defined as equipment with oils containing PCBs in excess of 50 ppm. Although equipment that contains oil with a PCB content of less than 50 ppm is not regulated under Federal management and disposal regulations, oil with a PCB content greater than 5 ppm must be disposed as "hazardous waste" in California.

All PCB- containing transformers were removed from NMCO and replaced with oil-containing transformers with non-detectable concentrations of PCBs by 1985. In 1994, a PCB survey was conducted. No PCB concentrations above 5 ppm were detected in industrial equipment (PWC 1994).

**Notifications.** For the purpose of this transfer, no notifications exist with respect to PCBs at NMCO.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to PCBs at NMCO.

## **6.7 RADON**

In 1994, a survey was conducted to determine radon levels in a representative sample of buildings at NMCO (Martin Marietta Energy Systems 1994). The sampling results indicated that concentrations of radon were well below the EPA action level of 4 picocuries per liter.

**Notifications.** For the purpose of this transfer, no notifications exist with respect to radon at NMCO.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to radon at NMCO.

## **6.8 PESTICIDES**

There is no evidence to suggest that pesticides, other than those ordinarily and routinely applied in a manner consistent with the standards for licensed application, were ever used at NMCO. Pesticides, insecticides, termiticides, and rodenticides were applied intermittently on an as needed basis at NMCO either by personnel from the Navy Public Works Pest Control Department or by contracted personnel.

TABLE 6-6

**DTSC SOIL SAMPLE ANALYSIS  
SUMMARY OF FINDINGS  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel	Building Number	Building Description/ Former Use	Year Built	Demolished	Lead Concentration (mg/kg)
115	D Williams	Housing	1943-1944		1,260*
					6,400*
	E Williams	Housing	1943-1944		519*
					113*
121	71	Ward	Pre-1949	X	152
					92
					96
122	69	Quarters	1943		225
					362
					109
130	67	Dental Annex	1942		345
					2,440
					804
131	101	School	1943		418
					312
					483
134	73	Administration Building	1943	X	286
					195
					2,750
162	18	Open Mess	1924		256
					314
					119

## Notes:

Lead concentrations from "Results of Soil Sampling from Lead-Based Paint, Naval Medical Center Oakland," DTSC 1997.

\*Soil removal occurred at Parcel 115 in 1999. Confirmation sampling results for Quarters D and E subsequent to removal were below the EPA action level of 400 mg/kg.

**TABLE 6-7**

**LEAD-BASED PAINT AT BUILDING 67, PARCEL 130  
NAVAL MEDICAL CENTER, OAKLAND**

<b>Sample Number</b>	<b>Average Concentration (mg/kg)</b>
130-D/E	674
130-F/G	229
130-H/J	631
130-K/L	355
<b>Average</b>	<b>472</b>

**Notes:**

From "Lead Sampling Results, Naval Medical Center Oakland," DTSC 1998.  
mg/kg - milligrams per kilogram

**TABLE 6-8**

**LEAD-BASED PAINT AT FORMER BUILDING 73, PARCEL 134  
NAVAL MEDICAL CENTER, OAKLAND**

<b>Sample Number</b>	<b>Concentration (mg/kg)</b>
134-D	42.2
134-E	450
134-F	40.8
134-G	777
134-H	109
134-J	358
134-K1	212
134-K2	190
134-L	89.7
<b>Average</b>	<b>252</b>

**Notes:**

From "Lead Sampling Results, Naval Medical Center Oakland," DTSC 1998.  
mg/kg - milligrams per kilogram

A review of past records indicates the following pesticides and herbicides may have typically been used at NMCO:

- |                |               |
|----------------|---------------|
| • Borid        | • Ficam-W     |
| • Diazinon     | • Havahart #3 |
| • Diazinon 4E  | • Malathion   |
| • Drione       | • PT-110      |
| • Dursban 4E   | • PT-515      |
| • Dursban L.O  | • Sevin 80W   |
| • Dursban T.C. | • Thuricide   |

Parcel 157 is the only parcel reportedly used for pesticide storage and mixing. Pesticides exceeding the EPA's residential preliminary remediation goals for soil were not detected in this area. No pesticide intensive-use locations have been identified at NMCO.

**Notifications.** For the purpose of this transfer, no notifications are required with respect to pesticides at NMCO.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to pesticides at NMCO.

## 6.9 RADIOACTIVE MATERIALS

A report of radiological evaluation of properties at NMCO was submitted to the U.S. Navy Radiation Safety Committee on November 1, 1996 and to the U.S. Nuclear Regulatory Commission on November 12, 1996. The Navy Environmental Health Center has confirmed that NMCO meets the requirements for transfer in the U.S. Nuclear Regulatory Commission NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination" and the U.S. Atomic Energy Commission Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors." Facilities at NMCO previously licensed for use of radioactive materials have now been released for unrestricted use, and the permits have been terminated by the Navy Radiation Safety Committee (NRSC 1996).

**Notifications.** For the purpose of this transfer, no notifications are required with respect to radioactive materials at NMCO.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to radioactive materials at NMCO.

## **6.10 MEDICAL DEBRIS REMOVAL FROM PRIVATE PROPERTY ADJACENT TO NMCO**

Non-biohazardous medical debris was discovered on adjacent property that was previously owned by the Navy at NMCO. This area is located east of Parcel 152. The area excavated consisted of soil and construction and medical debris of about 800 square feet. The debris removal was witnessed by the Alameda County Senior Health environmental specialist (Alameda County 1998). A final debris removal report was submitted to Alameda County who endorsed the satisfactory completion of the work. The final report was completed on October 21, 1998 (SSPORTS 1998).

## **6.11 SILVER RECOVERY UNIT**

During the course of normal hospital medical operations, photographic images are often utilized. The use of photographic imaging generates waste solutions that contain silver. To minimize the cost of these imaging operations, silver recovery units are often installed. As the waste solutions are considered hazardous, these units are required to be permitted. One such silver recovery unit was installed at the NMCO facility. This unit was permitted under one of the tiered permits of Permit-by-Rule. In a letter dated March 31, 1995, the Navy notified the DTSC that the silver recovery unit was operationally discontinued and requested that the DTSC permit be terminated. Any remaining waste solution after discontinuation of the unit was manifested as hazardous waste.

**Notifications.** For the purpose of this transfer, no notifications exist with respect to the silver recovery unit at the facility.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to the silver recovery unit at the facility.

## **6.12 GROUNDWATER WELLS**

There are three groundwater wells present at the NMCO facility. Historical maps from 1963 indicate the presence of an abandoned well in the chiller room of Building 500 on Parcel 137 and a second abandoned well near Building 13 on Parcel 110. There is also one active well located near Building 125 on Parcel 143.

**Notifications.** If the new owner does not intend to use the active well, it is recommended that he/she take action to close this well.

**Restrictions.** For the purpose of this transfer, no restrictions exist with respect to groundwater wells at the facility.

## **7.0 ENVIRONMENTAL CONDITION OF PROPERTY**

The Basewide Environmental Baseline Survey (EBS) identified 63 parcels at NMCO; 15 of the 63 parcels were classified as ECP area type 1, three were classified as ECP area type 2, and the remaining 45 parcels were classified as ECP area type 7. Based on the results of EBS sampling conducted in 1996 and the 1997 Defense Authorization Act, of the 45 parcels initially categorized as ECP area type 7, 34 were recategorized as ECP area type 1, eight were recategorized ECP area type 2, and three were recategorized as ECP area type 3. The ECP categories are defined as follows:

- |             |   |
|-------------|---|
| Area Type 1 | Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas). |
| Area Type 2 | Areas where only release or disposal of petroleum products has occurred.  |
| Area Type 3 | Areas where release of hazardous substances has occurred, but at concentrations that do not require removal or remedial action.                                 |

For parcels designated as ECP area type 1 or ECP area type 3, by definition, these parcels are suitable to transfer for unrestricted use. For parcels designated as ECP area type 2, the release of petroleum products was either at levels below residential action levels or was remediated to levels below residential action levels; ECP area type 2 parcels are also available to transfer for unrestricted use. Parcels classified as area type 1 will transfer under CERCLA Section 120(h)(4), those classified as area type 3 will be transferred under CERCLA Section 120(h)(3). Each parcel, its ECP category number, and status are included on Table 7-1.

TABLE 7-1

**ENVIRONMENTAL CONDITION OF PROPERTY  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel	ECP Category	Factors Potentially Affecting Transfer					Comments
		Former Storage Tanks	Known Asbestos Containing Materials	Lead-Based Paint	PCBs Exceeding EPA Action Levels	Radon Exceeding EPA Action Levels	
101	1						
102	1			X			Lead-based paint at Johnson Circle housing facility.
103	1						
104	1						
105	1						
106	1						
107	1						
108	2	X					ECP category 2 due to removed USTs. RWQCB closure letter 12/94.
109	1						
110	1	X	X				USTs suspected/no USTs present upon excavation. Asbestos abated in Buildings 8 and 11 by 5/24/95.
111	1			X			Lead-based paint and lead in soil at Barcelona/Santa Cruz housing facility. Remediation of lead in soil completed Fall 1997.
112	1						
113	1						
114	1		X				Asbestos abated 5/24/95.
115	2	X		X			ECP category 2 due to removed USTs. RWQCB closure letter 8/97. Remediation of lead in soil at Quarters D and E completed winter 1998.
116	1						
117	1		X				Asbestos abated 5/24/95.

TABLE 7-1 (Continued)

**ENVIRONMENTAL CONDITION OF PROPERTY  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel	ECP Category	Factors Potentially Affecting Transfer					Comments
		Former Storage Tanks	Known Asbestos Containing Materials	Lead-Based Paint	PCBs Exceeding EPA Action Levels	Radon Exceeding EPA Action Levels	
118	1						
119	1						
120	1						
121	1						
122	1						
123	1						
124	1						
125	1						
126	1						
127	1						
128	1						
129	1						
130	1						
131	1						
132	2	X					ECP category 2 due to removed UST. RWQCB closure letter 7/97.
133	1						
134	1		X				Asbestos abated 5/24/95.
135	1						

TABLE 7-1 (Continued)

**ENVIRONMENTAL CONDITION OF PROPERTY  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel	ECP Category	Factors Potentially Affecting Transfer					Comments
		Former Storage Tanks	Known Asbestos Containing Materials	Lead-Based Paint	PCBs Exceeding EPA Action Levels	Radon Exceeding EPA Action Levels	
136	1						
137	2	X					ECP category 2 due to removed UST. RWQCB closure letter 7/97.
138	1						
139	2	X					ECP category 2 due to removed UST. RWQCB closure letter 7/97.
140	1			X			Lead-based paint and lead in soil at Officer Quarters A Williams. Lead in soil at Officer Quarters C Williams. Buildings planned for demolition.
141	1						
142	1						
143	3						ECP category 3 based on sampling and analysis results from soil samples adjacent to sewer lines and sediment samples from Rifle Range Creek. <sup>a</sup>
144	1						
145	1						
146	1						
147	1						
148	1		X				Asbestos abated 5/24/95.
149	1		X				PCBs detected below action level in transformer. Asbestos abated 5/24/95.
150	1						
151	2	X					ECP category 2 due to removed USTs with apparent release; subsurface investigations performed, no constituents of concern detected. RWQCB closure letter 8/97.

TABLE 7-1 (Continued)

**ENVIRONMENTAL CONDITION OF PROPERTY  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel	ECP Category	Factors Potentially Affecting Transfer					Comments
		Former Storage Tanks	Known Asbestos Containing Materials	Lead-Based Paint	PCBs Exceeding EPA Action Levels	Radon Exceeding EPA Action Levels	
152	1						
153	2	X					ECP category 2 due to removed AST and detected concentration of petroleum.
154	1	X	X				Petroleum UST closed in place. RWQCB closure letter 8/97. Asbestos abated 5/24/95.
155	3						ECP category 3 due to PCBs in soil exceeding the PRG in one sample. <sup>a</sup>
156	1						
157	3		X				ECP category 3 due to pesticide storage. <sup>a</sup> Asbestos abated 5/24/95.
158	1						
159	2	X	X				ECP category 2 due to removed USTs. RWQCB closure letters 12/94 and 7/97. Hydraulic lift removed 1997. Asbestos abated 5/24/95.
160	3						ECP category 3 due to pesticide concentrations lower than action level. <sup>a</sup>
161	1						
162	1		X				Maximum detected concentration of radon (1.5 Pci/L - below action level). Asbestos abated 5/24/95.
163	1		X				Asbestos abated 5/24/95.

## Notes:

- a "EBS Sampling and Analysis Summary Report" by PRC EMI and U&A, December 17, 1996.
- AST Aboveground storage tank
- ECP Environmental condition of property
- PCB Polychlorinated biphenyl
- Pci/L Picocuries per liter
- RWQCB Regional Water Quality Control Board
- UST Underground storage tank

## **8.0 NOTICE OF HAZARDOUS SUBSTANCES**

Hazardous substances were stored on several parcels at NMCO as part of routine activities. The environmental baseline survey provides a parcel-by-parcel description of the hazardous substances stored, released, or disposed at NMCO. As required by CERCLA Section 120(h)1 and implemented by 40 Code of Federal Regulations 373.3, Table 8-1 of this FOST provides the required hazardous substances notification. The general requirements for the notice are as follows: Whenever any department, agency, or instrumentality of the United States enters into a contract to transfer real property, notice of any hazardous substances, as defined by CERCLA, stored for more than one year must be included in the transfer documents. The notice applies to storage of hazardous substances greater than one year and greater than or equal to 1,000 kilograms or the substance's CERCLA reportable quantity. The notice must also describe any release or disposal of hazardous substances greater than or equal to 1,000 kilograms or the substance's CERCLA reportable quantity. In the basewide EBS (ERM West 1994), hazardous materials/substances were noted as historically being stored on Parcels 105, 106, 113, 126, 132, 136, 137, and 154 at NMCO. However, the available information indicates that the quantities stored on Parcels 106, 113, 126, 132, and 137 were below the requirement for the notice. As such Table 8-1 includes information for Parcels 105, 136, and 154 only.

TABLE 8-1

**NOTICE OF PAST PRESENCE OF HAZARDOUS SUBSTANCES STORED, RELEASED, OR DISPOSED  
NAVAL MEDICAL CENTER, OAKLAND**

Parcel <sup>1</sup>	Building Number	Building Use	Substance	Quantity <sup>2</sup>		CASRN	Regulatory Synonym	RCRA Waste No.	Date <sup>3</sup>	S/R/D	Action Taken
				(kg)	(lb)						
105	216	Compressed	Acetylene	Unknown	Unknown				1942-1995	S	Substance Removed
		Gas Storage	Dichlorodifluoromethane	1300	2860	75718	Methane, dichlorodifluoro-	U075	1942-1995	S	Substance Removed
136	No Bldg.	Open Space	Halogenated Solvents	750-1125	1650-2475	Unknown	NA	F001, F002	1942-1995	S	Substance Removed
154	22	Main Boiler Plant	Water Treatment Chemicals	3750-5630	8250-12,386	Unknown	NA	Unknown	1942-1995	S	Substance Removed

## Notes:

- <sup>1</sup> - Parcels not included did not have documented storage, release, or disposal above reportable quantities  
<sup>2</sup> - Ranges are due to a range of densities used to calculate kilograms from gallons. Densities used to determine the quantities ranged from 1 to 1.5 kg/L  
<sup>3</sup> - ERM West, Inc., 1995. "Basewide Environmental Baseline Survey Report, Naval Medical Center, Oakland." Prepared for EFA-West 9 June 1995.

CASRN - Chemical Abstracts Service Registry Number

Dates cited in this notice are from the opening of NMCO to the time of the EBS report (ERM-West, Inc. 1995).  
 kg - Kilograms

S/R/D - Stored/Released/Disposed

lb - pounds  
 RCRA - Resource Conservation and Recovery Act

The information contained in this notice is required under the authority of regulations promulgated under section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") 42 U.S.C. section 9620(h).

Notice is hereby given that the information provided contains a notice of hazardous substances that are known and documented to have been used for one year or more, or known to have been released or disposed on certain portions of NMCO, and the dates that such storage, release, or disposal took place. 40 CFR Section 373.3(b) requires that the aforementioned statement be prominently displayed in this notice.

Chemicals specifically excluded from reporting were: incidental quantities of household-type cleaning chemicals and consumer products. Hazardous substances notification is not required for hazardous substances stored in quantities less than 1,000 kilograms or the CERCLA RQ, or 1 kilogram of acutely hazardous substances (40 CFR 373.2(b)).

## 9.0 REQUIRED ENVIRONMENTAL COVENANTS

The parcels at NMCO deemed suitable to transfer in this document will be transferred in accordance with federal real property disposal laws. The notice of hazardous substances as required by CERCLA Section 120(h)(1) is found in Table 8-1. In addition, it should be noted the transferee may be entitled to the statutory indemnification for closing bases pursuant to Section 330 of the National Defense Authorization Act for Fiscal Year 1993, Public Law 102-484, as amended by Section 1002 of the National Defense Authorization Act for Fiscal Year 1994, Public Law 103-160. The statute provides that, subject to certain conditions, the Secretary of Defense shall hold harmless and indemnify persons that acquire ownership or control of any facility at a military installation that is closing or closed pursuant to a base closure law from any claim for personal injury or property damage that results from the release of hazardous substances or petroleum products as a result of Department of Defense activities. The indemnification does not apply to the extent that persons seeking indemnification contributed to a release or threatened release. The deed will contain the deed covenants required by Sections 120(h)(3) and 120(h)(4) of CERCLA. The deed for conveyance of this property will contain the following:

For parcels with ECP type category 3, the following applies:

Under 42 U.S.C. §9602(h)(3), with respect to any portion of the Real Estate on which any hazardous substance was stored for one year or more, known to have been released, or disposed:

- (A) Grantor covenants that all remedial action necessary to protect human health and the environment with respect to any such substance remaining on the Property has been taken before the date of transfer to Grantee; and
- (B) any additional remedial action found to be necessary after the date of such transfer shall be conducted by the Grantor; and
- (C) Grantee covenants that Grantor shall have access to the Property in any case in which remedial or corrective action is found to be necessary after the date of such transfer.
- (D) Grantor is hereby giving notice to Grantee of Table 8-1 of the FOST entitled, "Notice of Past Presence of Hazardous Substances Stored, Released, or Disposed."

For parcels with ECP type category 2, the following applies:

With respect to any portion of the Real Estate where only release or disposal of petroleum has occurred:

Grantee covenants that Grantor shall have access to the Property in any case in which remedial action or corrective action is found to be necessary after the date of such transfer.

For parcels with ECP type category 1 the following applies:

Under 42 U.S.C. §9620(h)(4)(D), with respect to any portion of the Real Estate where no hazardous substances and no petroleum products or their derivatives were known to have been released or disposed:

- (A) Grantor covenants that any response action or corrective action found to be necessary after the date of transfer of the Property shall be conducted by the Grantor; and
- (B) Grantee covenants that the Grantor shall have access to the Property in any case in which a response action or corrective action is found to be necessary after the date of the conveyance of the Property or shall have access where necessary to carry out a response action or corrective action on adjoining property.

## **10.0 SUMMARY OF NOTIFICATIONS AND RESTRICTIONS**

Following is a summary of the notifications applicable to the transfer of parcels at Naval Medical Center, Oakland. There are no specific environmental restrictions applicable to the transfer of parcels at Naval Medical Center, Oakland.

### **10.1 NOTIFICATIONS**

The notifications contained in this section are based upon findings summarized in the disclosures discussed in Sections 6.1 through 6.9.

#### **10.1.1 Underground Storage Tanks**

This section serves as a notification that the following UST sites at NMCO contain residual contamination from petroleum products.

Parcel #	Tank ID
108	510A,-B,-C,-D
115	L63D, -E
132	505A
137	500A ✓
139	512A ✓
151	214A ✓
154	22-1,-2 ✓
159	141-A, -B

The levels of residual contamination are of no significant impact and the tanks meet the low-risk criteria for closure as identified in the San Francisco Bay RWQCB closure letters. For specific information on the individual sites, refer to the individual reports for the sites. This information may be found at the San Francisco Bay RWQCB records. Also, files are maintained at EFA West or its successor command.

#### **10.1.2            Former Hydraulic Lift at Parcel 159**

This section serves as a notification that residual concentrations of TPH exist at depths between 12 and 14 feet from the top of the slope at Parcel 159. The residual concentrations were measured in 1997. Due to biodegradation and natural attenuation, it is likely that the concentrations measured in 1997 have decreased substantially. The U.S. Environmental Protection Agency, the California Department of Toxic Substances Control, the California Department of Fish and Game, and the California Regional Water Quality Control Board have been involved in studies to evaluate potential risk to human health and the environment from these residual concentrations. The following reasons are the basis for the conclusion that there is no anticipated impact to human health or the environment from TPH concentrations remaining at the parcel:

- 1) studies on frog embryos showed no statistically significant impacts associated with residual TPH concentrations,
- 2) TPH concentrations in the creek bank measured in December 1998 do not significantly differ from ambient levels, and
- 3) residual concentrations of TPH are not migrating

#### **10.1.3            Asbestos**

Asbestos-containing materials exist in buildings 8, 11, 14, 18, 22, 70, 73, 110, 111, 115, 131, 501, 20B, and in a pipe outside of Building 22 at NMCO. This asbestos-containing material currently poses no human health or environmental problems; however, if the asbestos-containing material is not managed in compliance with the site operations and maintenance plan, and applicable local, state, and Federal laws and regulations, it may become a hazard.

#### **10.1.4            Lead-Based Paint**

Following are the notifications for residential and non-residential structures, respectively.

#### **10.1.4.1      Lead-Based Paint at Residential Structures**

This section serves as a notification that lead-based paint exists in residential buildings constructed before 1978 at NMCO which are part of this FOST. Lead exposure is especially harmful to young children and pregnant women. For purposes of this transfer, the transferee shall comply with all applicable Federal, state, and local laws and regulations relating to LBP. In accordance with 24 CFR, Part 35 and 40 CFR, Part 745, at the time of transfer, the disclosure information on lead-based paint and/or lead-based paint hazards shall include the elements in the “Sample Form for Transfer of Residential Dwellings” as shown in Appendix A. The disclosure information will contain the following:

- Statement by the Navy disclosing the presence of lead-based paint and/or lead-based paint hazards in paragraph (a)(i) of Appendix A:

“This section serves as a disclosure that lead-based paint exists in residential buildings built prior to 1978 at NMCO which are part of this FOST. The basis for the determination that lead-based paint and/or lead-based paint hazards exists in the housing, the location of the lead-based paint and/or lead-based paint hazards, and the conditions of the painted surfaces are contained in the reports listed below.”

- The notice, in accordance with 24 CFR 35.88, shall include all reports available pertaining to lead-based paint and/or lead paint hazards in the housing area and will include the following documents to be listed in paragraph (b)(i) of Appendix A:

- (1)“Lead Management Plan” for Barcelona/Santa Cruz Housing (PWC Norfolk 1996)
- (2)“Removal Action for Lead Contamination in Soil for Barcelona/Santa Cruz Housing” (IT 1997)

- A lead hazard information pamphlet in accordance with the Residential Lead-Based Paint Hazard Reduction Act and 24 CFR Part 35 titled “Protect Your Family From Lead in Your Home” (EPA#747-K-94-001) as noted in paragraph (d) of Appendix A.

#### **10.1.4.2      Lead-Based Paint at Non-Residential Structures**

Lead-based paint does exist in non-residential buildings at NMCO. Lead exposure is especially harmful to young children and pregnant women. Buildings constructed before 1978 may contain LBP. The recipient and its successor shall not permit the use, occupancy, demolition, renovation, or residential habitation of any structure unless the recipient and its successor complies with all applicable Federal, state, and local laws relating to LBP. Residential structures are defined as any house, apartment, or

structure intended for human habitation, including but not limited to a non-dwelling facility commonly used by children under 6 years of age such as a child care center, elementary school, or playground.

#### **10.1.5 Groundwater Wells**

If the new owner does not intend to use the active well, it is recommended that he/she take action to close this well.

#### **10.2 RESTRICTIONS**

There are no restrictions for the transfer of the Property at NMCO.

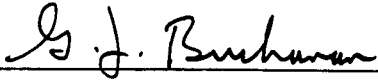
#### **11.0 UNRESOLVED REGULATORY AGENCY COMMENTS**

Written regulatory agency comments were addressed and/or incorporated into this document. There are no unresolved regulatory agency comments.

## 12.0 FINDING OF SUITABILITY TO TRANSFER

Based on the above information, I find that the property is suitable to transfer by deed for the intended purpose because the requirements of CERCLA 120(h)(3) and 120(h)(4) have been met for the property in that all remedial action necessary to protect human health and the environment with respect to CERCLA hazardous substances on the property has been taken, taking into account potential risk of future liability.

Therefore, I find that the property fully complies with all applicable laws and policies and is environmentally suitable for transfer. The reuse, as outlined in the reuse plan for NMCO, does not present a current or future risk to human health and the environment. Based on the foregoing information and analysis, the property covered by this FOST is suitable for transfer.



G.J. Buchanan  
Captain, CEC, USN  
Commanding Officer  
Engineering Field Activity West  
Naval Facilities Engineering Command

9/30/99

Date

## **APPENDIX A**

## SAMPLE FORM FOR TRANSFER OF RESIDENTIAL DWELLINGS

### **Disclosure of Information on Lead-Based Paint and Lead-Based Paint Hazards**

#### **Lead Warning Statement**

*Every purchaser of any interest in residential real property on which a residential dwelling was built prior to 1978 is notified that such property may present exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. Lead poisoning also poses a particular risk to pregnant women. The seller of any interest in residential real property is required to provide the buyer with any information on lead-based paint hazards from risk assessments or inspections in the seller's possession and notify the buyer of any known lead-based paint hazards. A risk assessment or inspection for possible lead-based paint hazards is recommend prior to purchase.*

#### **Navy Disclosure**

(a) Presence of lead-based paint and/or lead-based paint hazards (check one below):

(i) \_\_\_\_\_ Known lead-based paint and/or lead-based paint hazards are present in the housing (explain).  
\_\_\_\_\_

(ii) \_\_\_\_\_ Navy has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the purchaser (check one below):

(i) \_\_\_\_\_ Navy has provided the purchaser with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list all documents below).

(1)

(2)

(ii) \_\_\_\_\_ Navy has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

#### **Purchaser's Acknowledgment (initial)**

(c) \_\_\_\_\_ Purchaser has received copies of all information listed above.

(d) \_\_\_\_\_ Purchaser has received the pamphlet *Protect Your Family from Lead in Your Home*.

(e) \_\_\_\_\_ Purchaser has (check (i) or (ii) below):

(i) \_\_\_\_\_ received a 10-day opportunity (or mutually agreed upon period) to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards; or

(ii) \_\_\_\_\_ waived the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards.

#### **Certification of Accuracy**

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information they have provided is true and accurate.

\_\_\_\_\_  
Navy Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Purchaser

\_\_\_\_\_  
Date



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

VIA FACSIMILE  
(650) 244-2774

August 30, 1999

Commanding Officer  
Engineering Field Activity, West  
Naval Facilities Engineering Command  
900 Commodore Drive  
San Bruno, CA 94066-5006  
ATTN: Mr. Baha Zarah

Re: Final Finding of Suitability to Transfer for Naval Medical Center Oakland

Dear Mr. Zarah:

The U.S. Environmental Protection Agency (U.S. EPA) has received the document entitled "Final Finding of Suitability to Transfer (FOST) for Naval Medical Center, Oakland, California" (Final FOST for NMCO). The Final FOST was prepared on behalf of the Department of the Navy by Tetra Tech EMI and Uribe & Associates, and is dated August 1999 (transmitted electronically on August 2, 1999). In earlier correspondence U.S. EPA has commented on a June 1997 draft FOST (correspondence dated July 11, 1997), an August 1997 draft-final FOST (correspondence dated September 17, 1997), and most recently a March 1999 pre-final FOST (transmitted electronically on April 29, 1999). At the time of the draft-final FOST, lead-based paint (LBP) was the sole unresolved agency comment (see correspondence dated September 17, 1997).

Without independent investigation or verification of certain information contained in the documentation, the undersigned concurs, to the extent set forth below, with the Navy's determination that all remedial action necessary to protect human health and the environment with respect to any hazardous substances remaining on the Property has been taken at NMCO. The review of the documentation was completed pursuant to CERCLA Section 120(h)(3)(B), and the sole purpose of the concurrence is to satisfy the requirements of this provision. The undersigned expressly reserves all rights and authorities relating to information not contained in the documentation, whether such information is known as of this date, or discovered in the future.

If you have any questions, please contact Phillip Ramsey, of my staff at (415) 744-2365 or you may also call me at (415) 744-2384.

Sincerely,

A handwritten signature in dark ink, appearing to read "Tom Huetteman", with a long horizontal flourish extending to the right.

Tom Huetteman  
Chief, Navy Section  
Federal Facilities Cleanup Branch

cc: Mr. Larry Ramos  
Engineering Field Activity, West  
Naval Facilities Engineering Command  
900 Commodore Drive  
San Bruno, CA 94066-5006

Ms. Mary Rose Cassa  
California Department of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, CA 94710-2721

Mr. Michael Bessette Rochette  
California Regional Water Quality Control Board - San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Mr. Mel Blare  
Oakland Base Reuse Authority (OBRA)  
317 Murmansk Street, Bldg. 590  
Oakland Army Base, CA 94626